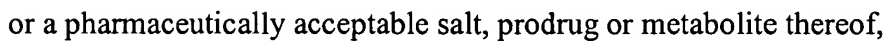
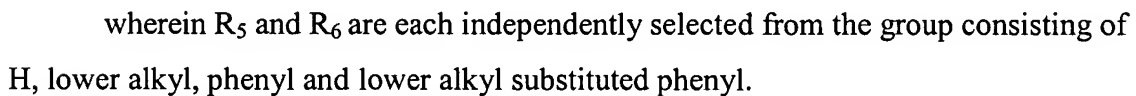


1. A method of treating movement disorders comprising administering to a patient in need of treatment, a composition comprising an amount effective for this purpose of a compound according to the following formula:



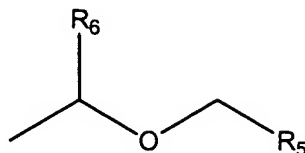
wherein R₃ and R₄ are each independently selected from the group consisting of lower alkyl, phenyl and lower alkyl substituted phenyl, and R₁ and R₂ are each independently either a hydrogen atom or a radical of the formula



2. The method according to claim 1, wherein R₅ and R₆ are each independently H or lower alkyl.

3. The method according to claim 1, wherein R₃ and R₄ are each independently phenyl.

4. The method according to claim 1, wherein at least one of R₁ and R₂ is defined by the formula



wherein R₅ and R₆ are each independently either H or lower alkyl.

5

5. The method according to claim 1, wherein at least one of R₁ and R₂ is -CH₂OCH₃.

10

6. The method according to claim 1, wherein both R₅ and R₆ are phenyl, R₁ is -CH₂OCH₃ and R₂ is H.

7. The method according to claim 1, wherein both R₅ and R₆ are phenyl and both R₁ and R₂ are -CH₂OCH₃.

15

8. The method according to claim 1, wherein said movement disorder is essential tremor.

9. The method according to claim 1, wherein said movement disorder is Parkinson's disease.

20

10. The method of claim 1, wherein said movement disorder is a focal dystonia.

11. The method of claim 10, wherein said focal dystonia is writer's cramp.

25

12. The method according to claim 1, wherein said therapeutically effective amount is from between about 150 mg to about 1500 mg, administered in one or in two divided daily doses.

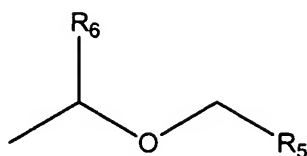
14. A method of treating movement disorders comprising administering to a subject in need of treatment a pharmaceutical dosage form comprising:

CC(R6)OCCR5

b) a pharmaceutically acceptable carrier.

16. The method according to claim 14, wherein R₃ and R₄ are both phenyl.

17. The method according to claim 14, wherein at least one of R₁ and R₂ is defined by the formula



wherein R₅ and R₆ are each independently selected from H or lower alkyl.

18. The method according to claim 14, wherein at least one of R₁ and R₂ is -CH₂OCH₃.

19. The method according to claim 14, wherein both R₅ and R₆ are phenyl, R₁ is -CH₂OCH₃ and R₂ is H.

20. The method according to claim 14, wherein both R₅ and R₆ are phenyl and both R₁ and R₂ are -CH₂OCH₃.

21. The method according to claim 14, wherein said movement disorder is essential tremor.

22. The method according to claim 14, wherein said movement disorder is Parkinson's disease.

23. The method of claim 14, wherein said movement disorder is a focal dystonia.

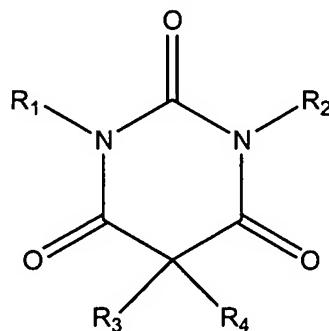
24. The method of claim 23, wherein said focal dystonia is writer's cramp.

25. The method according to claim 14, wherein said therapeutically effective amount is from between about 150 mg to about 1500 mg, administered in one or two divided daily doses.

5 27. The method according to claim 14, wherein said dosage form is selected from the group consisting of oral, rectal, topical, sub-lingual, mucosal, nasal, ophthalmic, subcutaneous, intramuscular, intravenous, transdermal, spinal, intrathecal, intra-articular, intra-arterial, sub-arachinoid, bronchial, lymphatic, and intra-uterillean administered dosage forms.

10

15



20

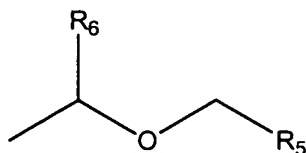
CC(R6)OCC(R5)

wherein R_5 and R_6 are each independently selected from the group consisting of H, lower alkyl, phenyl and lower alkyl substituted phenyl.

30. The method according to claim 29, wherein R_5 and R_6 are each
5 independently H or lower alkyl.

31. The method according to claim 29, wherein R_3 and R_4 are each
independently phenyl.

10 32. The method according to claim 29, wherein at least one of R_1 and R_2 is
defined by the formula



wherein R_5 and R_6 are each independently either H or lower alkyl.

15 33. The method according to claim 29, wherein at least one of R_1 and R_2 is
 $-\text{CH}_2\text{OCH}_3$.

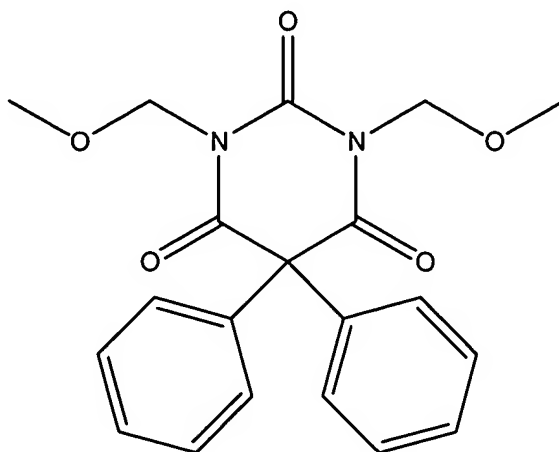
34. The method according to claim 29, wherein both R_5 and R_6 are phenyl, R_1
is $-\text{CH}_2\text{OCH}_3$ and R_2 is H.

20

35. The method according to claim 29, wherein both R_5 and R_6 are phenyl and
both R_1 and R_2 are $-\text{CH}_2\text{OCH}_3$.

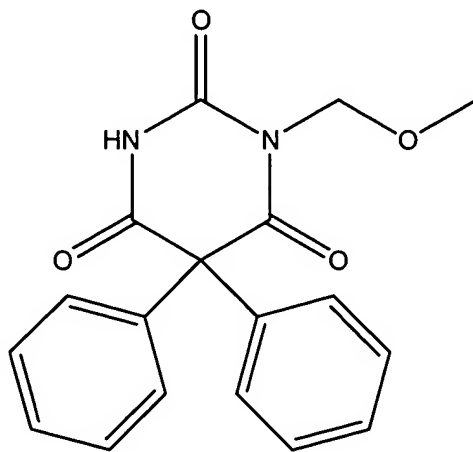
36. The method according to claim 29, wherein said therapeutically effective
25 amount is from between about 150 mg to about 1500 mg, administered in or two daily
doses.

38. A method of treating essential tremor comprising administering to a subject in need of treatment a composition comprising a therapeutically effective amount of a compound according to the following formula:



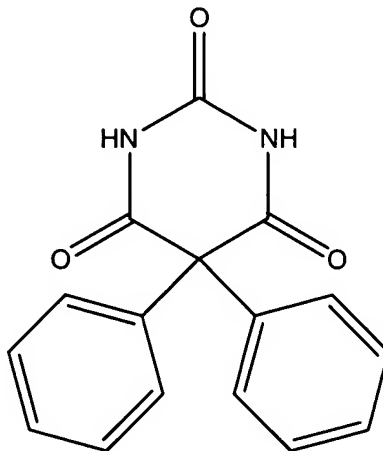
10

39. A method of treating essential tremor comprising administering to a subject in need of treatment a composition comprising a therapeutically effective amount of a compound according to the following formula:

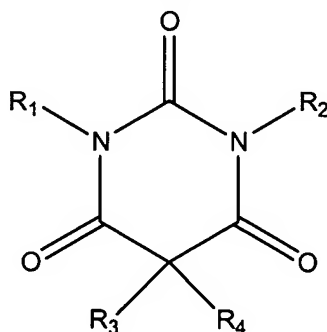


15

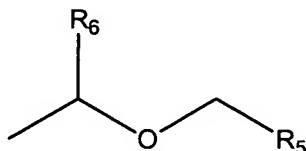
5 or a pharmaceutically acceptable salt, prodrug or metabolite thereof.



0 R_3 R_4
or a pharmaceutically acceptable salt, prodrug or metabolite thereof,



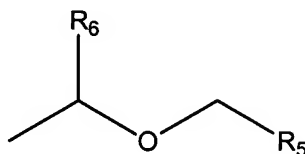
5 wherein R₅ and R₆ are each independently selected from the group consisting of H, lower alkyl, phenyl and lower alkyl substituted phenyl.



42. The method according to claim 41, wherein R_5 and R_6 are each independently H or lower alkyl.

43. The method according to claim 41, wherein R_3 and R_4 are each
5 independently phenyl.

44. The method according to claim 41, wherein at least one of R_1 and R_2 is defined by the formula



10 wherein R_5 and R_6 are each independently either H or lower alkyl.

45. The method according to claim 41, wherein at least one of R_1 and R_2 is $-\text{CH}_2\text{OCH}_3$.

15 46. The method according to claim 41, wherein both R_5 and R_6 are phenyl, R_1 is $-\text{CH}_2\text{OCH}_3$ and R_2 is H.

47. The method according to claim 41, wherein both R_5 and R_6 are phenyl and both R_1 and R_2 are $-\text{CH}_2\text{OCH}_3$.

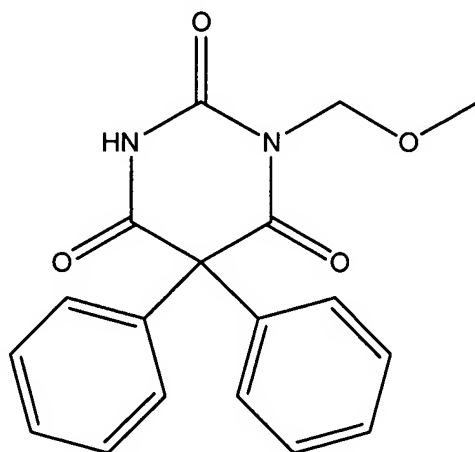
20

48. The method according to claim 41, wherein said therapeutically effective amount is from between about 150 mg to about 1500 mg, administered in or two daily doses.

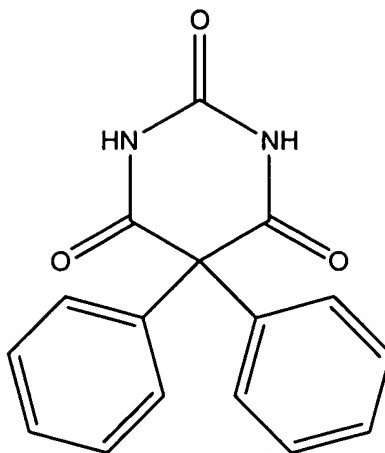
25 49. The method according to claim 48, wherein said therapeutically effective amount is from between about 200 mg to 1200 mg, administered in or two daily doses.

Chemical structure of 1,3-bis(methoxymethyl)-5,5-diphenylpyrrolidin-2-one. The structure features a central pyrrolidin-2-one ring. The nitrogen atoms at positions 1 and 3 are substituted with methoxymethyl groups (-CH₂OMe). The carbon at position 5 is substituted with two phenyl groups.

51. A method of treating Parkinson's disease comprising administering to a subject in need of treatment a composition comprising a therapeutically effective amount of a compound according to the following formula:

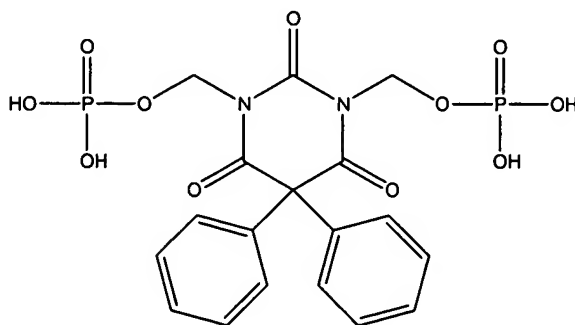


52. A method of treating Parkinson's disease comprising administering to a subject in need of treatment a composition comprising a therapeutically effective amount of a compound according to the following formula:



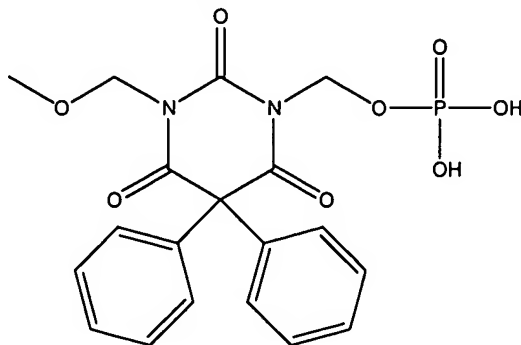
53. The method of claim 1 wherein said movement disorder is selected from a group consisting of tremor, dystonia, chorea, athetosis, a tic disorder, myoclonus, hemiballismus, myoclonus, torticollis, writer's cramp, restless leg syndrome and asterixis.

55. A method of treating movement disorders comprising administering to a subject in need of treatment a composition comprising a therapeutically effective amount of a compound according to the following formula:



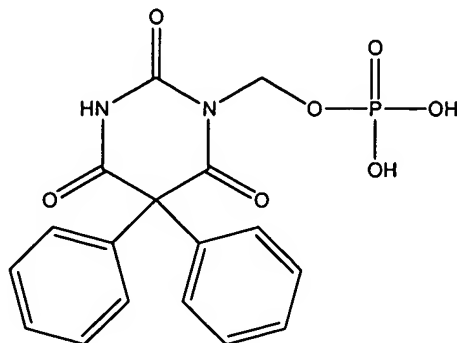
or a pharmaceutically acceptable salt, prodrug or metabolite thereof.

57. A method of treating movement disorders comprising administering to a
5 subject in need of treatment a composition comprising a therapeutically effective amount
of a compound according to the following formula:



10 58. The method of claim 57, wherein the movement disorder is essential
tremor.

59. A method of treating essential tremor comprising administering to a subject in need of treatment a composition comprising a therapeutically effective amount of a compound according to the following formula:



60. The method of claim 59, wherein the movement disorder is essential
20 tremor.